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10/587,778	07/28/2006	Hajime Mackawa	MAT-8872US	9923
53473	7590	04/29/2011		
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			EXAMINER	
			BENOIT, ESTHER	
			ART UNIT	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/587,778

**Applicant(s)**

MAEKAWA ET AL.

**Examiner**

ESTHER BENOIT

**Art Unit**

2453

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 33-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 33-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendments***

1. This Action is in response to a Request for Continued Examination filed on February 8, 2011. Claims 33, 42, and 51 have been amended. Claims 33-59 are pending in this application.

***Response to Arguments***

2. Applicant's arguments, see Remarks, filed 2/8/2011, have been fully considered but are not persuasive. The applicants are arguing in substance the following:

**Arguments under 35 U.S.C. 103 (a)**

***Arguments to Claim 42:***

a) The prior art reference- O'Neill in view of O'Toole, does not disclose the tunnel communication is performed between end nodes without the use of the access apparatus because the tunnel communication performed in O'Neill still goes through the access node. Therefore, the tunnel communication does not bypass the access node in O'Neill.

b) The destination device 36-M found in O'Toole, is not capable of performing tunnel communication because end nodes 30 and 36-M do not perform the communication with each other but instead uses an access node to perform the tunnel.

c) The system of O'Toole, does not transmit sustain data because the tunnel manager 90, would be managing the sustain data and not gateway 34-1. And thus, the sustain data is already received in this system from the tunnel manager 90.

d) O'Neill's access node acts as a "pass through" node and is therefore, not excluded from the tunnel communication.

e) If the access node 605, found in O'Neill replaces the access node 34-1, found in O'Toole, the system of O'Toole would not function because access node 605 cannot perform tunnel operations.

***Response to arguments of Claim 42:***

As to point a, the argument has been considered but is not persuasive. The claim limitation states "exclusive of the access apparatus" which suggests the access apparatus is not in communication with the end nodes during tunnel connection. The limitation does not state this access apparatus is bypassed. In paragraph [0070], O'Neill discloses the access node is NOT involved in either the signaling or tunneling connection, which means this node is not utilized for these purposes. Signals are generated directly by end node 604, and transmitted to the other end node for a tunnel connection.

As to point b, the argument has been considered but is not persuasive. In Figure 2, O'Toole describes the method for performing a tunnel connection between a first and second device via a first and second gateway. There is no mention or suggestion of a

direct tunnel connection between the first and second device recited in the claim limitations.

As to point c, the argument has been considered but is not persuasive. To begin, the applicants have not made clear what this 'sustain data' is. Therefore, this data can essentially be anything data transmitted. In addition, in Col. 17, lines 45-67 and Col. 18, lines 22-45, O'Toole discloses the tunnel manager determines which tunnel connection to use for the tunnel connection based on traffic type. Once the traffic type is determined, the tunnel manager sends the connection information to establish a tunnel connection between the gateway and the device.

As to point d, the argument has been considered but is not persuasive. This argument is essentially the same as the argument a above. Therefore, please see response to point a.

As to point e, the argument has been considered but is not persuasive. Both references teach access nodes that are utilized in performing a tunnel connection between end nodes. Replacing the access node 605 of O'Neill will not deem the system of O'Toole inoperable because O'Neill teaches a first embodiment with the use of the access node for establishing a tunnel connection and a second embodiment without the access node involved in the establishment of the connection. Therefore, the teachings of O'Toole can be modified to include the latter functionality of O'Neill.

As to any claims not specifically discussed, the applicants argued that it was patentable for one of the reasons discussed above. Please see response to above arguments for unspecified discussions.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 33, 35-36, 38-42, 44-45, 47-51, and 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Toole, Jr. et al. (US 7,673,048 B1), hereinafter O'Toole, in view of O'Neill et al. (US 2003/0224758 A1).

**With respect to claim 42, O'Toole discloses:**

- a sustain data demand receiver for receiving a demand for sustain data transmitted from the data processing apparatus in order to sustain the tunnel communication performed by both the data processing apparatus and the other data processing apparatus (Figure 1 and Col. 7, lines 51-58, *first tunnel connection is established between client device and destination device through a gateway*);

- a sustain data demand transmitter for transmitting the received demand for sustain data to a tunnel managing apparatus connected to the access apparatus through a communication line (Figure 4 and Col. 12, lines 16-36, *tunnel manager 90 has the capability of IP routing between multiple tunnel connections*);
- a sustain data receiver for receiving a sustain data transmitted from the tunnel managing apparatus in response to the demand for sustain data (Col. 18, *tunnel manager intercepts tunnel connection request from client device and sends it to second gateway to establish a tunnel connection*);
- and a sustain data transmitter for transmitting the sustain data to the data processing apparatus (Col. 8, lines 9-18, *gateway device receives connection request from client device and transmits request to destination device to establish a tunnel connection*).

O'Toole does not explicitly disclose:

- the sustain data received by the data processing apparatus indicates a connection time for the tunnel communication, and is used by the data processing apparatus to perform tunnel communication with the other data processing apparatus exclusive of the access apparatus;

However, O'Neill discloses the sustain data received by the data processing apparatus indicates a connection time for the tunnel communication between the data

processing apparatus and the other data processing apparatus exclusive of the access apparatus ([0043] and [0070], *where node includes lifetime timer for the tunnel state and access nodes are not involved in tunneling connection*);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teachings of O'Toole with the teachings of O'Neill to exclude the access node in the tunneling connection, *because* it will allow for reduced signaling distance associated with establishing tunnel connections for time efficiency purposes (O'Neill, [0068]).

**With respect to claim 51**, O'Toole discloses:

the access apparatus comprises:

- a first demand receiver for receiving a demand for transmission of sustain data regarding sustaining of the tunnel communication performed by the data processing apparatus, from the data processing apparatus in order to sustain the tunnel communication performed by both the data processing apparatus and the other data processing apparatus (Figure 1 and Col. 7, lines 51-58, *first tunnel connection is established between client device and destination device through a gateway*);
- a demand transmitter for transmitting the received demand for transmission concerned to the tunnel managing apparatus, in the case where the first demand receiver received the demand for transmission



(Figure 4 and Col. 12, lines 16-36, *tunnel manager 90 has the capability of IP routing between multiple tunnel connections*);

- a sustain data receiver for receiving the sustain data transmitted from the tunnel managing apparatus in response to the demand for sustain data (Col. 18, *tunnel manager intercepts tunnel connection request from client device and sends it to second gateway to establish a tunnel connection*);
- a first sustain data transmitter for transmitting the sustain data concerned to the data processing apparatus, in the case where the sustain data receiver received the sustain data (Col. 8, lines 9-18, *gateway device receives connection request from client device and transmits request to destination device to establish a tunnel connection*).

the tunnel managing apparatus comprises:

- a tunnel communication data controlling unit for controlling tunnel communication data regarding the tunnel communication (Col. 18, *tunnel manager intercepts tunnel connection request from client device and sends it to second gateway to establish a tunnel connection*);
- a second demand receiver for receiving the demand for transmission transmitted from the access apparatus (Col. 18, *tunnel manager intercepts tunnel connection request from client device and sends it to second gateway to establish a tunnel connection*);

- and a second sustain data transmitter for transmitting the sustain data to the access apparatus based on the tunnel communication data, in the case where the second demand receiver received the demand for transmission (Col. 18, *tunnel manager sends connection request to second gateway to establish a tunnel connection*);

O'Toole does not explicitly disclose:

- the sustain data received by the data processing apparatus indicates a connection time for the tunnel communication, and is used by the data processing apparatus to perform tunnel communication with the other data processing apparatus exclusive of the access apparatus;

However, O'Neill discloses the sustain data received by the data processing apparatus indicates a connection time for the tunnel communication between the data processing apparatus and the other data processing apparatus exclusive of the access apparatus ([0043] and [0070], *where node includes lifetime timer for the tunnel state and access nodes are not involved in tunneling connection*);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teachings of O'Toole with the teachings of O'Neill to exclude the access node in the tunneling connection, *because* it will allow for reduced signaling distance associated with establishing tunnel connections for time efficiency purposes (O'Neill, [0068]).

**With respect to claim 33**, the method of claim 33 is rejected for the same reasons as the apparatus of claim 42 above. Please see rejection above.

**With respect to claims 35-36, 44-45, and 53**, O'Toole discloses a tunnel control data receiving step, in which the access apparatus receives tunnel control data transmitted from the data processing apparatus; a tunnel communication data modification judging step, in which the access apparatus judges whether to modify the tunnel communication data or not; and a tunnel control data transmitting step, in which the access apparatus transmits the tunnel control data to the tunnel managing apparatus, in the case where it judged that the tunnel communication data should be modified (Col. 8, lines 25-48, *based on gateway proximity to device for reduction of traffic or use of bandwidth, a second gateway of closer proximity may be used based on the determination of the first gateway*).

**With respect to claim 38 and 47**, O'Toole discloses the access apparatus executes the sustain data demand receiving step at prescribed time intervals (Col. 15, lines 13-39).

**With respect to claim 39 and 48**, O'Toole discloses an identifier registration step of registering identifier, in which the access apparatus identifies at least one of the addresses of tunnel communication, to be performed by the data processing apparatus and the data processing apparatus concerned, before executing the sustain data demand receiving step (Col. 9, lines 22-33).

**With respect to claim 40, 49, and 54**, O'Toole discloses the tunnel communication data modification judging step judges if the identifier for identifying the different data processing apparatus is registered in advance in the access apparatus or not and, in the case where such identifier is registered, executes the tunnel control data transmitting step (Col. 10, lines 6-27).

**With respect to claim 41 and 50**, O'Toole discloses the tunnel communication data is controlled by the tunnel managing apparatus, and is used for controlling the tunnel communication (Figure 4 and Col. 12, lines 16-36, *tunnel manager*).

**With respect to claim 55**, O'Toole discloses the tunnel control data is a data demanding modification of time when the data processing apparatus can perform the tunnel communication (Col. 8, lines 25-48, *based on gateway proximity to device for reduction of traffic or use of bandwidth, a second gateway of closer proximity may be used based on the determination of the first gateway*).

5. Claims 34, 37, 43, 46, 52, and 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Toole, Jr. et al. (US 7,673,048 B1), hereinafter O'Toole, in view of O'Neill et al. (US 2003/0224758 A1), and further in view of King (US 2002/0194292 A1).

**With respect to claim 34 and 43**, O'Toole and O'Neill do not explicitly disclose the sustain data is used for the data processing apparatus to judge whether to cancel the tunnel communication or not.

However, King discloses the sustain data is used for the data processing apparatus to judge whether to cancel the tunnel communication or not (Figure 4-5 and ([0030], *if a time period allotted for tunnel*)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teachings of O'Toole and O'Neill with the teachings of King to determine when to cancel or terminate a tunnel connection, *because* it will allow for better security by provided only trusted and wanted communication to occur.

**With respect to claim 37, 46, and 52**, O'Toole discloses the tunnel communication data indicates, a data regarding time of the tunnel communication (Col. 15, lines 13-39), and a data regarding charging of the tunnel communication (Col. 18, lines 46-59)

O'Toole and O'Neill do not explicitly teach at least one of a data regarding the tunnel communication allow/disallow flag.

However, King discloses at least one of a data regarding the tunnel communication allow/disallow flag (Figure 4-5 and ([0030], *if a time period allotted for tunnel*)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teachings of O'Toole and O'Neill with the teachings of King to determine when to allow or disallow a tunnel connection, *because* it

will allow for better security by provided only trusted and wanted communication to occur.

**With respect to claim 56-58**, O'Toole discloses the tunnel communication data indicates, a data regarding time of the tunnel communication (Col. 15, lines 13-39), and a data regarding charging of the tunnel communication (Col. 18, lines 46-59)

O'Toole and O'Neill do not explicitly teach at least one of a data regarding the tunnel communication allow/disallow flag.

However, King discloses at least one of a data regarding the tunnel communication allow/disallow flag (Figure 4-5 and ([0030], *if a time period allotted for tunnel*)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teachings of O'Toole and O'Neill with the teachings of King to determine when to allow or disallow a tunnel connection, *because* it will allow for better security by provided only trusted and wanted communication to occur.

**With respect to claim 59**, O'Toole discloses charge information for indicating a cost to be charged for tunnel communication (Col. 18, lines 46-59).

O'Toole and O'Neill do not explicitly disclose a tunnel communication allow/disallow flag for indicating whether the tunnel communication is allowed or not.

However, King discloses at least one of a data regarding the tunnel communication allow/disallow flag (Figure 4-5 and ([0030], *if a time period allotted for tunnel*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teachings of O'Toole and O'Neill with the teachings of King to determine when to allow or disallow a tunnel connection, *because* it will allow for better security by provided only trusted and wanted communication to occur.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ESTHER BENOIT whose telephone number is (571)270-3807. The examiner can normally be reached on Monday through Friday between 7:30 a.m and 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Krista M. Zele can be reached on 571-272-7288. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

E.B

April 18, 2011

/Krista M. Zele/  
Supervisory Patent Examiner, Art Unit 2453